



Manufacturing Inc.

370 N. Lincoln • P.O. Box 571 • Colville, WA 99114-0571 • USA

Phone: (509)684-2595 • Fax: (509)684-8331

<http://www.colmaccoil.com>

mail@colmaccoil.com

## CASE STUDY

- PRODUCT:** COLMAC BF INDUSTRIAL BLAST FREEZER
- APPLICATION:** LOW TEMPERATURE (-28°F) BLAST FREEZING
- FACILITY:** BLAST FREEZING MODULE FOR FISH CATCHING AND PROCESSING SHIP
- (QTY) X MODEL:** (1) X 2/4BF-208-H-I
- SPECIFICATIONS:** 7.5 Tons Capacity, -28F Box, -40F SST  
Direct Expansion R507  
16,000 CFM Airflow  
Hot Gas Defrost  
5/8" x 0.020 Copper Tubes, 8 Rows Deep  
0.010" Aluminum Fins, Variable Fin Spacing (2 fpi in first two coil rows, 4 fpi in last six rows)  
2 x 3 Hp, 1450 rpm, Cast Aluminum Fans  
18.6 sq ft Face Area  
975 lbs Operating Weight  
Overall Dimensions: 43" H x 34" D x 82" L

### DESCRIPTION:

Colmac has worked closely with Pacific Northwest design/build contractors who manufacture specialized **low temperature blast freezing** systems for the **fishing industry**. One such company has developed a complete range of skid-mounted blast freezing machines using **Colmac BF and BFL** evaporator units (shown below). The blast freezers have **box temperature** capabilities as low as **-55°F**, and are **completely portable** for installation on shore, or on board fish processing vessels.

**Colmac BF and BFL** Blast Freezer evaporator units have been designed to match the requirements of compact blast freezing systems. The units are arranged for **blowthrough operation** with fans and motors mounted on the air entering side of the coil. This configuration works well for developing **airflow** patterns in the **confined spaces** typical of blast freezing applications.

**Colmac BF/BFL** units also feature a very **compact** cabinet design. **Fin spacing** is **variable** to accommodate heavy blast freezing frost loads. Fins are spaced at 2 per inch on the air-entering side of the coil where frost accumulation is greatest, with remaining rows at 4 fins per inch. Optional **cast aluminum fans** are high efficiency airfoil type.

**Hot gas defrost** in the system shown is accomplished with only one evaporator unit per compressor by a proprietary design. This defrost system has been successfully installed and operated on hundreds of systems for over 12 years. **Colmac BF/BFL** units can also be arranged for **electric defrost**.

